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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/639,946

08/17/2000

Hidehiko Nagaya

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4852

22850

7590

08/28/2002

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EXAMINER

TSAI, HENRY

ART UNIT

PAPER NUMBER

3722

DATE MAILED: 08/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/639,946

Applicant(s)

NAGAYA ET AL.

Examiner

Henry W.H. Tsai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-57 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-57 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2/4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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**DETAILED ACTION**

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 112***

2. Claims 19-31, and 42-57 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 19, line 2, it is not clear what is meant by "an opposite second edge corner defined by at least one opposite cutting edge" since it is not understandable. Note generally, an edge corner can not be defined by only one cutting edge

In claim 26, lines 1-2, it is not clear where the sub-cutting edge located in the claimed invention.

In claim 26, it is not clear what is meant by "a sub-cutting edge inclined so as to retreat inside" since it is not understandable. What is the reference to be inclined? Similar problems exist in claim 31.

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In claim 28, it is not clear what is meant by "made as small as a rake angle of the second edge corner" since it is not understandable.

In claim 28, it is not clear why the strengthening portion is related with the relationship between the rake angles of the fourth edge corner and the second edge corner.

In claim 29, line 4, "the first cutting edge" lacks proper antecedent basis since it was not previously defined.

In claim 30, lines 3-4, "the first cutting edge" lacks proper antecedent basis since it was not previously defined.

In claim 42, lines 6-7, it is not clear what is meant by "one of the two cutting edge is positioned on an opposite of the tip body from an opposite cutting edge" since it is not understandable.

In claim 43, line 3, it is not clear where the "two opposing ridges" are located since it was not well described.

In claim 43, lines 2-3, it is not clear what is meant by "in a surface being set to 90°" since it is not understandable. Where is the surface in the claimed invention? Similar problems exist in claim 49.

Applicant is required to review the claims and correct all language which does not comply with 35 U.S.C. § 112, second paragraph.

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***Claim Rejections - 35 USC § 102***

3. Claims 19-31, and 41-48, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Hertel(3,226,797).

Hertel discloses the claimed invention comprising, as shown in Figs. 1 and 2, a first edge corner(at 18) having a corner angle of 90° or less, and opposite second edge corner(at 17) defined by at least one opposite cutting edge that is not parallel to a cutting edge of the first edge corner, wherein the tip(1) is formed of an approximately quadrilateral-shaped plate.

Note Hertel also discloses the limitations described in claims 20-31, and 41-46 as shown in Figs. 1 and 2.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the

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art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 32-40, and 49-57, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Hertel in view of the Japanese Patent No. JP-10291115 (JP'115).

Hertel discloses the claimed invention except for: a plurality of tips mounted to the distal end of the tool body; and the first and second front cutting edges being provided at the distal end of the tool body.

JP'115 discloses a cutting tool comprising a plurality of tips(3) mounted to the distal end of the tool body(1); and the first and second front cutting edges(8, 12) being provided at the distal end of the tool body(1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Hertel's device to comprise a plurality of tips mounted to the distal end of the tool body; and the first and second front cutting edges being provided at the distal end of the tool body, as taught by JP'115, in order to increase the machining power and to improve the strength, rigidity for the Hertel's tool body.

#### **Response to Arguments**

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6. Applicant's arguments mailed 7/15/02 have been considered but are moot in view of the new ground(s) of rejection.

**Conclusion**

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

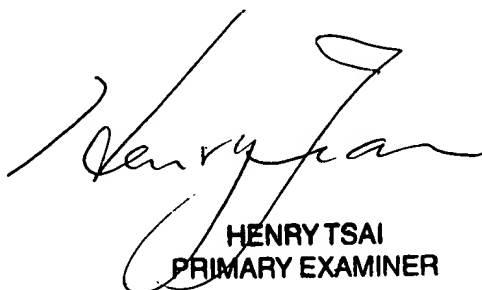
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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**Contact Information**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Henry Tsai whose telephone number is (703) 308-7600. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, A. L. Wellington can be reached on (703) 308-2159. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **TC 3700 receptionist whose telephone number is (703) 308-1148.**

9. In order to reduce pendency and avoid potential delays, Group 3720 is encouraging FAXing of responses to Office actions directly into: **the Group at fax number 703-872-9302; and Official faxes for After Final amendments should be sent to 703-872-9303.** This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into Group 3700 will be promptly forward to the examiner.

  
**HENRY TSAI**  
**PRIMARY EXAMINER**

August 26, 2002